

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	120	(circulat\$3 (fluid near pressure)) same ball near10 return and "166"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2010/09/16 08:12
L3	144	(circulat\$3 (fluid near5 pressure)) same ball near10 return and "166"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2010/09/16 08:12
L4	126	(circulat\$3 (fluid near5 pressure)) same ball near10 return and "166"/\$.ccls. and tool	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2010/09/16 08:12
S1	0	"166"/\$.ccls. and carousel	USOCR	OR	ON	2003/10/17 10:07
S2	3385	"166"/\$.ccls. and ((free near fall) or gravity)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/10/17 10:08
S3	320	"166"/\$.ccls. and ((inject or inecting) and sensor)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/03/09 15:31
S4	50	"166"/\$.ccls. and ((free near fall) or gravity) and tool and (deploying or deploy)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/03/09 15:32
S5	55	"166"/\$.ccls. and robot	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/03/09 15:32
S6	31	"166"/\$.ccls. and carousel	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/03/10 08:00

S7	29	("2713909"   "3517736"   "3545474"   "3568767"   "3602300"   "3674123"   "4068729"   "4095649"   "4291724"   "4407361"   "4444275"   "4553600"   "4784527"   "4785880"   "4899823"   "4940095"   "4993492"   "5025865"   "5188178"   "5413170"   "5425420"   "5813455"   "6039122"   "6044905"   "RE36723"   "6182765"   "6223825"   "6269875"   "6336238"   "2002/0040782").PN.	USPAT	OR	OFF	2003/03/09 15:48
S8	2	("6386290").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2003/03/09 15:58
S9	196	well and (carousel same tool)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/03/10 08:12
S10	117	(well and (carousel same tool)) and (temperature or pressure or composition)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/03/10 08:19
S11	42	(well and (carousel same tool)) and (temperature or pressure or composition) and sensor	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/03/10 08:19
S12	30	("2713909"   "2915422"   "3186014"   "3218659"   "3232090"   "3266076"   "3322140"   "3404421"   "3562014"   "3779270"   "4135949"   "4345893"   "4401133"   "4457037"   "4477105"   "4477205"   "4574830"   "4607893"   "4709719"   "4793016"   "5025865"   "5277248"   "5433236"   "5759140"   "5873139"   "5890531"   "5913637"   "6022421"   "6039122"   "6079074").PN.	USPAT	OR	OFF	2003/03/10 08:46
S13	4	(inject\$4 adj sensor\$1) and "166"/\$. ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/08/27 16:26
S14	4	(inject\$4 adj sensor) and "166"/\$. ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/08/27 16:27
S15	37	(inject\$4 near2 sensor) and "166"/\$. ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/08/27 16:36

S16	63	(inject\$4 adj tool) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/08/27 16:47
S17	5	(injecting adj tool) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/08/27 16:48
S18	1	(injecting adj sensors) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/08/27 16:49
S19	0	(injecting adj robot) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/08/27 16:49
S20	1	(injecting adj sensor) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/08/27 16:49
S21	1	(injecting adj pig) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/08/27 17:01
S22	9	("2713909"   "3396789"   "3545474"   "4210208"   "4260022"   "5437302"   "5884656"   "6022421"   "6039122").PN.	USPAT	OR	OFF	2003/08/27 16:53
S23	108	injecting adj (pig tool sensor)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/08/27 17:04
S24	37	injecting adj2 sensor	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/08/27 17:12
S25	3	("3877520").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2003/08/27 17:16
S26	2	("6443228").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2003/08/27 17:16
S27	4	("3260112"   "4916312"   "6234257"   "6241028").PN.	USPAT	OR	OFF	2003/08/27 17:16
S28	1808	carousel and sensor	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2003/10/15 11:42

S29	6	carousel and sensor and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/10/15 11:46
S30	38	(carousel magazine) and sensor and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/10/15 11:47
S31	0	(carousel magazine) and sensor and "166"/\$.ccls.	USOCR	OR	ON	2003/10/15 11:47
S32	229	(carousel magazine) and sensor	USOCR	OR	ON	2003/10/15 11:47
S33	171	(carousel magazine) and sensor and well	USOCR	OR	ON	2003/10/15 17:17
S34	1719	(carousel magazine) and (sensor tool) and well	USOCR	OR	ON	2003/10/15 17:17
S35	7	(carousel magazine) and (sensor tool) and "166"/\$.ccls.	USOCR	OR	ON	2003/10/15 17:17
S36	6	((("3086167") or ("4560437") or ("5553677"))).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2003/10/16 14:49
S37	8	barrett.in. and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/10/16 19:18
S38	188	"166"/\$.ccls. and (free adj fall)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/10/17 10:30
S39	51	"166"/\$.ccls. and (free adj fall)	USOCR	OR	ON	2003/10/17 10:09
S40	73	"166"/\$.ccls. and (free adj fall) and retriev\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2003/10/17 10:30
S41	65	"166"/\$.ccls. and robot	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2004/01/02 17:25
S42	1262	ball adj valve and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/01 11:36
S43	170	(166/193,194).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/06/01 15:14

S44	196	(166/255.1,250.11,255.2).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/06/01 12:59
S45	43	166/193,194.ccls. and (fall\$3 drop \$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2004/06/10 14:14
S46	2	166/193,194.ccls. and (free same fall \$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2004/06/01 15:43
S47	22	166/193,194.ccls. and ((halt\$3 or stop\$4) same fluid)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/10 14:33
S48	3983	((halt\$3 or stop\$4) same (fluid or flow)) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/10 14:34
S49	1858	((halt\$3 or stop\$4) near5 (fluid or flow)) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/10 14:34
S50	1236	((halt\$3 or stop\$4) near5 (fluid or flow)) and "166"/\$.ccls. and (drop\$4 or fall\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/10 14:39
S51	510	((halt\$3 or stop\$4) near5 (fluid or flow)) and "166"/\$.ccls. and (drop\$4 or fall\$4) and retriev\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/10 14:42
S52	121	((halt\$3 or stop\$4) near5 (fluid or flow)) and "166"/\$.ccls. and ((drop \$4 or fall\$4) near5 (tool ball sensor)) and retriev\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/18 15:32
S53	11	((halt\$3 or stop\$4) near5 (fluid or flow)) and "166"/\$.ccls. and ((free\$3 near3 fall\$4) near5 (tool ball sensor))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/10 15:16
S54	6	((halt\$3 or stop\$4) near5 (fluid or flow)) and "166"/\$.ccls. and ((free\$3 near3 fall\$4) near5 (tool ball sensor)) and retriev\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2004/06/10 15:57
S55	3	("3730267").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2004/06/10 15:57
S60	0	(deploy\$3 near5 (tool ball sensor)) near5 while near5 ((halt\$3 or stop \$4) near5 (fluid or flow)) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/18 15:34

S61	0	(deploy\$3 near5 (tool ball sensor)) near5 while near5 ((halt\$3 or stop\$4) same (fluid or flow)) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/18 15:35
S62	0	(deploy\$3 near5 (tool ball sensor)) near5 while near5 (fluid or flow) same (halt\$3 or stop\$4) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/18 15:35
S63	0	(deploy\$3 near5 (tool ball sensor)) near5 while near5 (fluid or flow) same (halt\$3 or stop\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/18 15:35
S64	0	(deploy\$3 near5 (tool ball sensor)) near5 while near5 (fluid or flow)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/18 15:35
S65	0	(deploy\$3 near5 (tool ball sensor)) near5 while	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/18 15:35
S66	5445	(deploy\$3 near5 (tool ball sensor))	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/18 15:36
S67	0	(deploy\$3 near5 (tool ball sensor)) same while	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/18 15:36
S68	10	(deploy\$3 near5 (tool ball sensor)) same (fluid flow) same (halted stopped)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/18 15:37
S69	105	free near3 fall\$3 same (tool ball sensor) and "166"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/04/18 15:37
S70	4	((("5881379") or ("5710915")).PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/04/28 11:16
S71	9	("5222235"   "5408654"   "5412805"   "5481701"   "5517641"   "5555409"   "5596747"   "5625817"   "5721915").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2005/04/28 11:53
S72	9	("5881379").URPN.	USPAT	OR	OFF	2005/04/28 11:58
S73	4	("3877520").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/05/04 19:44
S74	6	((("4618285") or ("3877520")).PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2008/05/06 16:22

S75	2	("6241028").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2009/06/29 23:18
S76	4	((("6241028") or ("6302199")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2009/06/29 23:18
S77	4	("3086167").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2009/06/30 12:30
S78	16	("6241028").URPN.	USPAT	OR	ON	2009/06/30 12:33
S79	14	("3086167"   "3260112"   "3651530" "3673629"   "4916312"   "5181571"   "5565624"   "5839508" "6145378"   "6170573"   "6234257"   "6241028").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/06/30 12:56
S80	16	("0597185"   "2713909"   "2955654" "3039531"   "3063080"   "3146477"   "4491177"   "5188178" "5277248"   "6056058").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/06/30 13:00
S81	6	("2866213"   "3715055"   "4073303" "4211279").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/06/30 13:06
S82	5	("2713909"   "3545474"   "4260022").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/06/30 13:25
S83	148	((halt\$3 or stop\$4) near5 (fluid or flow)) same well and (drop\$4 or fall \$4 or free\$3 adj fall) same tool and retriev\$4 same tool	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/07/27 12:34
S84	15	((halt\$3 or stop\$4) near5 (fluid or flow)) near5 well and (drop\$4 or fall \$4 or free\$3 adj fall) near5 tool and retriev\$4 near5 tool	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2010/07/27 12:35
S85	3	reverse near5 circulat\$3 same tool same return and subsea near3 well \$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2010/09/15 18:23
S86	114	reverse near5 circulat\$3 same tool same return and "166"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2010/09/15 18:30
S87	28	reverse near5 circulat\$3 same tool near5 return and "166"/\$.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2010/09/15 18:30

S88	5	reverse near5 circulat\$3 same ball near5 return and "166"/\$.cls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2010/09/15 20:09
S89	15	reverse same circulat\$3 same ball near10 return and "166"/\$.cls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2010/09/15 20:12

**EAST Search History (Interference)**

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